

a second top-gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [a source of] said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

2 (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first bottom gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second bottom gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein [a signal is applied to]

a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [a source of] to said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

3. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a signal is applied to a gate of said second thin film transistor from said second signal line through at least said first thin film transistor;

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a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is [connected to a source of] supplied with a voltage from said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

4. (Amended) An operation method of [an active matrix] semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first top-gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second top-gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor];

a surface smoothing film formed over said first and second thin film transistors;

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a pixel electrode formed over said surface smoothing film wherein said pixel electrode is connected to [a source of] said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

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5. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first bottom gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second bottom gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor];

a surface smoothing film formed over said first and second thin film transistors;

a pixel electrode formed over said surface smoothing film wherein said pixel electrode is connected to [a source of] said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

6. (Amended) An operation method of [an active matrix] semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a signal is applied to a gate of said second thin film transistor from said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor];

a surface smoothing film formed over said first and second thin film transistors;

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a pixel electrode formed over said surface smoothing film wherein said pixel electrode is [connected to a source of] supplied with a voltage from said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

7. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first top-gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second top-gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [a source of] said voltage supply line through at least said second thin film transistor; and

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a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

8 (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first bottom gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second bottom gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [a source of] to said voltage supply line through at least said second thin film transistor; and

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a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

9. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a signal is applied to a gate of said second thin film transistor from said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is [connected to a source of] supplied with a voltage from said voltage supply line through at least said second thin film transistor; and

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a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

10. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first top-gate type thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second top-gate type thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

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a pixel electrode formed over said substrate wherein said pixel electrode is connected to [the other one of said second pair of impurity regions of] said voltage supply line through at least said second thin film transistor; and
a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

11. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first bottom gate type thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second bottom gate type thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor is electrically connected to [from] said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

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a pixel electrode formed over said substrate wherein said pixel electrode is connected to [the other one of said second pair of impurity regions of] said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

12. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein a signal is applied to a gate of said second thin film transistor from said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

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a pixel electrode formed over said substrate wherein said pixel electrode is [connected to the other one of said second pair of impurity regions of] supplied with a voltage from said voltage supply line through at least said second thin film transistor;
and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

13. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first top-gate type thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;
a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second top-gate type thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

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a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

a surface smoothing film formed over said first and second thin film transistors;

a pixel electrode formed over said surface smoothing film wherein said pixel electrode is connected to [the other one of said second pair of impurity regions of] said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

14. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first bottom gate type thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second bottom gate type thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from]

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is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

a surface smoothing film formed over said first and second thin film transistors;

a pixel electrode formed over said surface smoothing film wherein said pixel electrode is connected to [the other one of said second pair of impurity regions of] said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

15. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein a

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signal is applied to a gate of said second thin film transistor from said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

a surface smoothing film formed over said first and second thin film transistors;

a pixel electrode formed over said surface smoothing film wherein said pixel electrode is [connected to the other one of said second pair of impurity regions of] supplied with a voltage from said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

16. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first top-gate type thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

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a second top-gate type thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [the other one of said second pair of impurity regions of] said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

17. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first bottom gate type thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

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a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second bottom gate type thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [the other one of said second pair of impurity regions of] said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

18. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

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a first thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein a signal is applied to a gate of said second thin film transistor from said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

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a pixel electrode formed over said substrate wherein said pixel electrode is [connected to the other one of said second pair of impurity regions of] supplied with a voltage from said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

19. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first top-gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second top-gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor]; and

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a pixel electrode formed over said substrate wherein said pixel electrode is connected to [a source of] said voltage supply line through at least said second thin film transistor;

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

20. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first bottom gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second bottom gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor]; and

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [a source of] said voltage supply line through at least said second thin film transistor;

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

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said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

21. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor;]

a second thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a signal is applied to a gate of said second

thin film transistor from said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor]; and

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [a source of] said voltage supply line through at least said second thin film transistor;

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

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22. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first top-gate type thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second top-gate type thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [the other one of said second pair of impurity regions of] said voltage supply line through at least said second thin film transistor; and

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

23. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first bottom gate type thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second bottom gate type thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

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a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [the other one of said second pair of impurity regions of] said voltage supply line through at least said second thin film transistor; and

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,
said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

24. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein a signal is applied to a gate of said second thin film transistor from said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

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a pixel electrode formed over said substrate wherein said pixel electrode is [connected to the other one of said second pair of impurity regions of] supplied with a voltage from said voltage supply line through at least said second thin film transistor; and

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

said method comprising a step of applying a voltage from said voltage supply line to said pixel electrode for a period during one frame, wherein said period is determined in accordance with a desired tone of a display.

25. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first top-gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second top-gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [a source of] said voltage supply line through at least said second thin film transistor; and

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a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

26. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first bottom gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second bottom gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [a source of] said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film

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transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

27. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a signal is applied to a gate of said second thin film transistor from said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is [connected to a source of] supplied with a voltage from said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

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said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

28. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first top-gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second top-gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor];

a surface smoothing film formed over said first and second thin film transistors;

a pixel electrode formed over said surface smoothing film wherein said pixel electrode is connected to [a source of] said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

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said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

29. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first bottom gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second bottom gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor];

a surface smoothing film formed over said first and second thin film transistors;

a pixel electrode formed over said surface smoothing film wherein said pixel electrode is connected to [a source of] said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

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said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

30. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a signal is applied to a gate of said second thin film transistor from said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor];

a surface smoothing film formed over said first and second thin film transistors;

a pixel electrode formed over said surface smoothing film wherein said pixel electrode is [connected to a source of] supplied with a voltage from said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

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said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

31. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first top-gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second top-gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [a source of] said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

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said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

32. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first bottom gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second bottom gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [a source of] said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

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said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

33. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a signal is applied to a gate of said second thin film transistor from said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is [connected to a source of] supplied with a voltage from said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

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said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

34. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first top-gate type thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second top-gate type thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [the other one of said second pair of impurity regions of] said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film

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transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

35. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first bottom gate type thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second bottom gate type thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [the other one of said second pair of impurity regions of] said voltage supply line through at least said second thin film transistor; and

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a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

36. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

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a first thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein a signal is applied to a gate of said second thin film transistor from said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is [connected to the other one of said second pair of impurity regions of] supplied with

a voltage from said voltage supply line through at least said second thin film transistor;
and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

37. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first top-gate type thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;
a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second top-gate type thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

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a surface smoothing film formed over said first and second thin film transistors;
a pixel electrode formed over said surface smoothing film wherein said pixel electrode is connected to [the other one of said second pair of impurity regions of] said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

38. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first bottom gate type thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second bottom gate type thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

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a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

a surface smoothing film formed over said first and second thin film transistors;

a pixel electrode formed over said surface smoothing film wherein said pixel electrode is connected to [the other one of said second pair of impurity regions of] said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

39. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein a

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signal is applied to a gate of said second thin film transistor from said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

a surface smoothing film formed over said first and second thin film transistors;

a pixel electrode formed over said surface smoothing film wherein said pixel electrode is [connected to the other one of said second pair of impurity regions of] supplied with a voltage from said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

40. (Amended)An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first top-gate type thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

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a second top-gate type thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [the other one of said second pair of impurity regions of] said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

41. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first bottom gate type thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

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a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second bottom gate type thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

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a pixel electrode formed over said substrate wherein said pixel electrode is connected to [the other one of said second pair of impurity regions of] said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

42. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein a signal is applied to a gate of said second thin film transistor from said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

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a pixel electrode formed over said substrate wherein said pixel electrode is [connected to the other one of said second pair of impurity regions of] supplied with a voltage from said voltage supply line through at least said second thin film transistor; and

a driving circuit formed over said substrate for driving at least one of said first and second thin film transistors, said driving circuit comprising a third thin film transistor wherein a channel forming region of said third thin film transistor comprises crystalline silicon,

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

43. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first top-gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second top-gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor]; and

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [a source of] said voltage supply line through at least said second thin film transistor;

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

44. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

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a first bottom gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second bottom gate type thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor]; and

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [a source of] said voltage supply line through at least said second thin film transistor;

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

45. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

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a second signal line extending across said first signal line [wherein said second signal line is connected to a drain of said first thin film transistor];

a second thin film transistor having a channel region comprising crystalline silicon formed over said substrate wherein a signal is applied to a gate of said second thin film transistor from said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to a drain of said second thin film transistor]; and

a pixel electrode formed over said substrate wherein said pixel electrode is [connected to a source of] supplied with a voltage from said voltage supply line through at least said second thin film transistor;

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

46. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first top-gate type thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

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a second top-gate type thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [the other one of said second pair of impurity regions of] said voltage supply line through at least said second thin film transistor; and

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

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said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

47. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first bottom gate type thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second bottom gate type thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein [a signal is applied to] a gate of said second thin film transistor [from] is electrically connected to said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is connected to [the other one of said second pair of impurity regions of] said voltage supply line through at least said second thin film transistor; and

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

48. (Amended) An operation method of [an active matrix] a semiconductor device comprising:

a substrate having an insulating surface;

a first signal line extending over said substrate;

a first thin film transistor having a channel region comprising crystalline silicon and a first pair of impurity regions formed over said substrate wherein a gate of said first thin film transistor is connected to said first signal line;

a second signal line extending across said first signal line [wherein said second signal line is connected to one of said first pair of impurity regions of said first thin film transistor];

a second thin film transistor having a channel region comprising crystalline silicon and a second pair of impurity regions formed over said substrate wherein a signal is applied to a gate of said second thin film transistor from said second signal line through at least said first thin film transistor;

a voltage supply line formed over said substrate [wherein said voltage supply line is connected to one of said second pair of impurity regions of said second thin film transistor];

a pixel electrode formed over said substrate wherein said pixel electrode is [connected to the other one of said second pair of impurity regions of] supplied with a voltage from said voltage supply line through at least said second thin film transistor; and

wherein a channel width of said second thin film transistor is larger than a channel width of said first thin film transistor,

said method comprising a step of applying one or more pulses from said voltage supply line to said pixel electrode during one frame wherein a number of pulses applied to said pixel electrode during one frame is determined in accordance with a desired tone of a display.

49. (Amended) The method according to [claim 12] any one of claims 3, 6, 9, 12, 15, 18, 27, 30, 33, 36, 39 or 42 wherein said [active matrix] semiconductor device is a liquid crystal device.

Please add the following new claims:

--67. (New) The method according to claim 3 or 27 wherein said second signal line is connected to a drain of said first thin film transistor, said voltage supply line is connected to a drain of said second thin film transistor, and said pixel electrode is connected to a source of said thin film transistor.